FREIGHT NEWS

Freight Transportation Profile—North Carolina Freight Analysis Framework

Understanding future freight activity is important for matching infrastructure supply to demand and for assessing potential investment and operational strategies. To help decisionmakers identify areas in need of capacity improvements, the U.S. Department of Transportation developed the Freight Analysis Framework (FAF), a comprehensive national data and analysis tool, including county-to-county freight flows for the truck, rail, water, and air modes. FAF also forecasts freight activity in 2010 and 2020 for each of these modes. Information about the methodology used in developing FAF is available on the Office of Freight Management and Operations' website www.ops.fhwa.dot.gov/freight.

The U.S. freight transportation network moves a staggering volume of goods each year. Over 15 billion tons of goods, worth over $9 trillion, were moved in 1998. The movement of bulk goods, such as grains, coal, and ores, still comprises a large share of the tonnage moved on the U.S. freight network. However, lighter and more valuable goods, such as computers and office equipment, now make up an increasing proportion of what is moved. FAF estimates that trucks carried about 71 percent of the total tonnage and 80 percent of the total value of U.S. shipments in 1998. By 2020, the U.S. transportation system is expected to handle about 23 billion tons of cargo valued at nearly $30 trillion.

North Carolina

Table 1 presents information on freight shipments that have either an origin or a destination in North Carolina. As shown in the table, trucks moved a large percentage of the tonnage and value of shipments, followed by rail. Figures 1 and 2 show freight flows on the highway and rail modes.

Truck traffic is expected to grow throughout the state over the next 20 years. Much of the growth will occur in urban areas and on the Interstate highway system (Figures 3 and 4). Truck traffic moving to and from North Carolina accounted for 13 percent of the average annual daily truck traffic (AADTT) on the FAF road network. Approximately 14 percent of truck traffic involved in-state shipments, and 10 percent involved trucks traveling across the state to other markets. Nearly 63 percent of the AADTT were not identified with a route-specific origin or destination.

Table 2 shows the top five commodity groups shipped to, from, and within North Carolina by all modes. The top commodities by weight are nonmetallic minerals and secondary traffic. Secondary traffic is also the top commodity by value. Secondary traffic is defined as freight flows to and from distribution centers or through intermodal facilities. No commodities are assigned to this intermediate step in the transportation process.

Table 1. Freight Shipments To, From, and Within North Carolina: 1998, 2010, and 2020

NORTH CAROLINA	Tons (millions)			Value (billions $)		
	1998	2010	2020	1998	2010	2020
State Total	511	756	944	426	820	1,324
By Mode						
Air	<1	1	2	29	72	126
Highway	426	641	808	381	719	1,152
Other[a]	1	3	4	<1	<1	1
Rail	79	104	121	15	26	41
Water	5	7	9	1	2	3
By Destination/Market						
Domestic	493	726	900	392	748	1,189
International	18	30	44	34	72	134

Note: Modal numbers may not add to totals due to rounding.

[a] The "Other" category includes international shipments that moved via pipeline or by an unspecified mode.

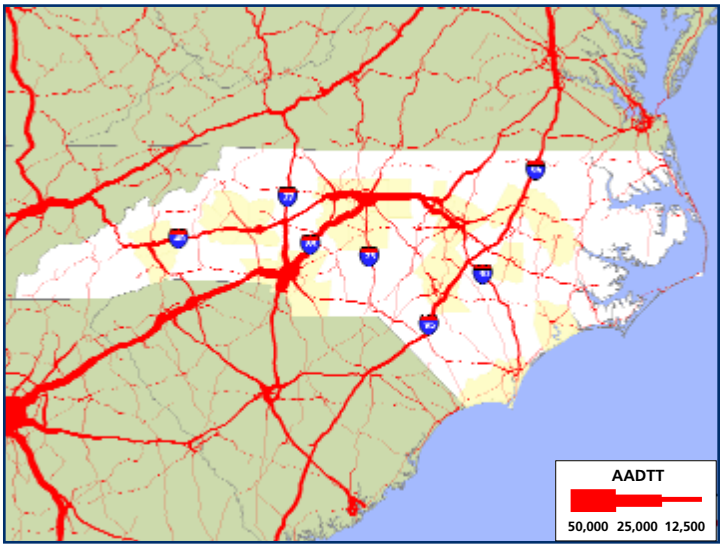
Figure 1. Freight Flows To, From, and Within North Carolina by Truck: 1998 (tons)

Federal Highway Administration

Figure 2. Freight Flows To, From, and Within North Carolina by Rail: 1998 (tons)

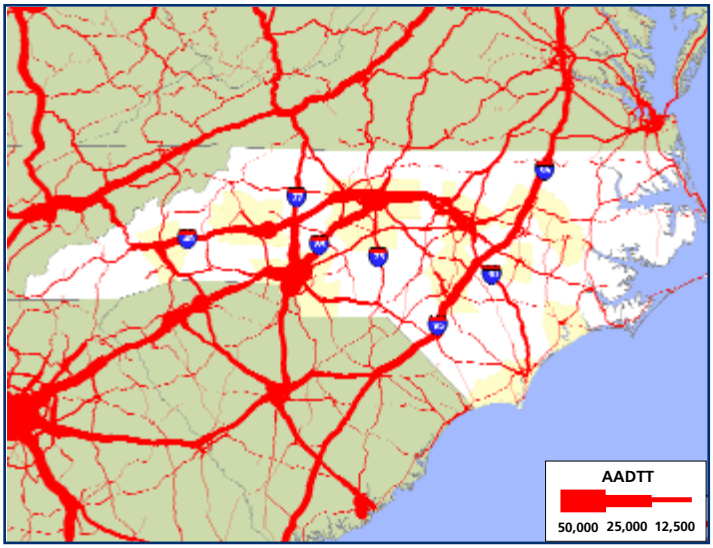
Federal Railroad Administration

Figure 3. Estimated Average Annual Daily Truck Traffic: 1998



Federal Highway Administration

Figure 4. Estimated Average Annual Daily Truck Traffic: 2020



Federal Highway Administration

Table 2. Top Five Commodities Shipped To, From, and Within North Carolina by All Modes: 1998 and 2020

Commodity	Tons (millions)		Commodity	Value (billions $)	
	1998	2020		1998	2020
Nonmetallic Minerals	120	161	Secondary Traffic	77	324
Secondary Traffic	75	211	Textile Mill Products	49	59
Lumber/Wood Products	46	96	Chemicals/Allied Products	45	110
Chemicals/Allied Products	41	66	Transportation Equipment	41	109
Farm Products	38	43	Food/Kindred Products	34	119

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A series of FAF products are available on the website noted below. FAF outputs include freight flow maps for states, modes, and gateways; detailed databases on traffic flows and commodity movements; information on the methodologies used to develop FAF; and forecast assumptions.

The U.S. Department of Transportation, Bureau of Transportation Statistics (BTS) is also developing a series of state transportation profiles. For more information and to obtain a copy of the BTS reports, please call 202-366-DATA.

U.S. Department of Transportation

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